State of Wisconsin Department of Natural Resources dnr.wi.gov

Wadable Stream Qualitative Fish Habitat Rating for Streams > 10 m wide

Form 3600-532B (R 6/07)

Page 1 of 2

	Instructions: Bold fields must be completed. Record all measurements in metric units.									
	Station Summary									
	Stream Name Such & 490	n R	rver		Waterbody 507	ID Code グ〇	SWIMS Sta 6030		FH Databas	e ID 5 A
•	Date (MMDDYYYY)	Station Nar		Stree	et be	ilge	B			
	Latitude - Longitude E			sed	***************************************	***************************************				m Used
	Terrain /	Vaviga	Yor						W	<u>6584</u>
	Start Latitude 43,74443	Start Longi 8 子・子		End Latitude		End Longitude		County Shel	504804	<u> </u>
	Water Characteristics									A STATE OF THE STA
	Time (24-hr clock) . /3: 45	Air Temperatu	re (C)	Water Tempe	and a series	Conductivit	y (μs/cm) 7 - 4		Transparency	/ (cm)
	Dissolved Oxygen (mg/l)	14.28	, Dis		n % Saturation 82 * 5		bH &	53		
	Floyy(m³/see)-	Water Level	(check one	- measure dis	tance if Above	or Below Nor	mal): W	ater Clarit	y:	
)/e	1079 ×	Normal	Below		_(m) Abo	ve:	(m)	Clear ,	Turbid	Stained
	Channel and Basin C		5							n 2 a 1 3 4 po 3 3 a 1 6 7 3
	Mean Stream Width (m) 75			Station	Length (m)	40	00		
	Channel Condition: (check one)	Natural	> 20- Chan	year-old nelization	10- to 2 Channe	0-year-old lization		-year-old nnelization		crete Channel
	Percent Channelizati	on Sinuosity	1.03		nt (m/km) 1 - 86	Stream	n Order 5		asin Area (kr	n²)
	Comments / Notes									
	Rotrieve S	2 44	1208 l	al Q	13:1	fo·				
*	No flor	~ ·	Non	weel	als a					

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	12
	(12)	8	4	0	101
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
deepest depths recorded	25)	16	8	0	25
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run	
average stream width	12	8	4	habitat; ratio > 25	0
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	
	25	16	8	<u></u>	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	. ()
	25	16	. (8)	0	8
				Total Score	43

State of Wisconsin Department of Natural Resources dnr.wi.gov

Wadable Stream Qualitative Fish Habitat Rating for Streams > 10 m wide

Form 3600-532B (R 6/07)

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Instructions: Bold field	is must be completed	. Record all measu	ırements in met	tric units.			
Station Summary			gas description de la company			and the sales of the sales	
Stream Name	D)400		Waterbody ID	Code S	WIMS Static		H Database ID
Shebbygan	River		1 50 10	5 Q [1603/	829	37699092
Date (MMDDYYYY)	Station Name		a f	~		, a	Lue,
08022011	accomposts	V403	Nac	اسل ک	ersel	<u> 1 </u>	
Latitude - Longitude D					(Datum Used
Terrain	Navigator						WGS 89
Start Latitude	Start Longitude	End Latitude	End	Longitude	-// C	ounty	sygah
43.74466	84.7306	7 43.74	3/0 8	7.735	>//	Suro	sugan
Water Characteristics							
Time (24-hr clock)	Air Temperature (C)	Water Temperat		Conductivity		Tr	ansparency (cm)
14:45		26.9	5	698	18		
Dissolved Oxygen (mg/l)	11.88	Dissolved Oxygen 9			8.42		
	11,00	13	2.09		8.40	`	THE STATE OF THE S
Flow (m³/sec)	Water Level (check o	ne - measure distan	ce if Above or B	elow Norma	al): Wat	er Clarity:	
Secretarion and the secretarion of the secretarion	Normal Be	low:(r	n) DAbove:		(m)	Clear	Turbid Stained
Channel and Basin Cl	AND THE STATE OF T						
Mean Stream Width (r	n) // ^	and the second s	Station Le	ngth (m)	1/6/	`	-
	" 40.0				400)	
Channel Condition: (check one)	Natural C	20-year-old nannelization	10- to 20-ye Channeliza		Chann	ear-old elization	Concrete Channel
Percent Channelization		Gradient (Stream C	Order	Bas	in Area (km²)
<i>D</i>	1 11/5) - 86		<u>5</u>		
Comments / Notes	-	*****					
		_					
.1.	× 1 . Δ) d (o				

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	
	12	8	4	0	8
Maximum Thalweg Depth	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	(S.)
Average of the four deepest depths recorded	25	16	8	0	16
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	
	12	8	4	0	
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	Ile
	25	(16)	8	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	
÷	25	16	(8)	0	
				Total Score	48

Form 3600-532B (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary Stream Name Waterbody ID Code SWIMS Station ID FH Database ID 10842 50100 Date (MMDDYYYY 201 2011 Latitude - Longitude Determination Method Used Datum Used Navigator ecrain End Latitude End Longitude Start Latitude County' 43.74132 Water Characteristics Water Temperature (C) Time (24-hr clock) Air Temperature (C) Conductivity (µs/cm) Transparency (cm) Dissolved Oxygen % Saturation Dissolved Oxygen (mg/l) Water Level (check one - measure distance if Above or Below Normal): Flow (m³/sec) Water Clarity: 2.01 Below: _ Clear L Turbid _lAbove: Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 15 m **Channel Condition:** 10- to 20-year-old Natural > 20-year-old < 10-year-old Concrete Channel (check one) Channelization Channelization Channelization **Percent Channelization** Sinuosity Gradient (m/km) Stream Order Basin Area (km²) 0-86 Comments / Notes

Form 3600-532B (R 6/07)

Page 2 of 2

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	8
	12	8	4	0	.
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
deepest depths recorded	25	16	8	0	16
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	
	12	8	4	0	12
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	25
	(25)	16	8	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	1/
:	25	(16)	. 8	0	16
				Total Score	

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Form 3600-532B (R 6/07)

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instructions: Bold field	is must be completed.	Necola all lileasur	ememo m me	me armo.				
Station Summary		l.	Natorbadu ID	Code les	WIMS Stat	on ID	FH Database II	
Stream Name	River	[Naterbody ID ちろわく	- 1	100112		12910.	
Sheboygar			30700		100110	01	1001000	
Date (MMDDYYYY)	Station Name	1/2/2000	Munde	ipol	100	16.9	0	
09012011	UP STEAR F				Marine	-	Datum I	lood
Latitude - Longitude D						•		28K
Lecrain 1	Vallgator		Ena	I Longitude		· · · · · · · · · · · · · · · · · · ·	ING	<u> </u>
Start Latitude 43.73162	Start Longitude	End Latitude		7.76	2/5	County	, 504 Qa	U
Billion Committee Committe		1 43.40	0000 0	1,70	010			
Water Characteristics				Samuel and Marillan	(ue/em)	ŀ	Francia and Co	m)
Time (24-hr clock)	Air Temperature (C)	Water Temperatu	(e (C) C	conductivity	1.5	1	Fransparency (c	
11110	33.0	1 00.40	<u> </u>	10	F 1 0		() & / \)
Dissolved Oxygen (mg/l)	10.19	Dissolved Oxygen %	Saturation 5		PH 8./	4	TPS	:472
Flow (m³/sec)	Water Level (check or		e if Above or B	elow Norm	al): Wa	ter Clarit	/ :	
1.5	Normal Normal	ow: <u>0 · 10</u> (m) Above:		(m) [Clear	XTurbid C	Stained
Parallel Committee of the Committee of t	* In watch indicated and Policy Linear steps and Durang State (SA) (SA)		, Landove.		\''' _			
Channel and Basin C	a mean result on Automatic respection and residue in according 50%.		Station Le	nath (m)		ang Name (1991)	VALUE	
Mean Stream Width ($\partial D = 0$		Station Le	ngin (m)	40	Ď		
Channel Condition: (check one)	Natural Ch	0-year-old annelization	10- to 20-y			year-old nelization	Concre	te Channel
Percent Channelization	on Sinuosity	Gradient (n	n/km)	Stream (Order	8:	asin Area (km²)	
C	2.41	/-	47		5			
Comments / Notes	- 1 C - 1 1 1	Darm &	80°F					
wy: Clean	CIL 36	o bt.	υ,					
steen y	outh To		/\					
Orstance /Bt)	porth (ot)	Vel Cot	/5)					
RB	0	o '						
/\L	x 25	0.55	w.					
3	0.32	0.79						
10	0.70	0.89		,				
15	1.00	0.81						
26	1.10							
25	1.25	0.96	erster Merchanische und der Stellen der	مجهدت المستلفانية الأمو هوم ياس				
30	and the second s	0.84						
35	1.0	0.94						
1115	1.60	1:95						
to find	19400	5.63	tanan salata wa makati a Wamalah dhali katalaina ji salata	المنشاخة فالمتعاقبين والمتعاقب والمتعاقب والمتعاقب والمتعاقب والمتعاقب والمتعاقب والمتعاقب والمتعاقب والمتعاقب	ώ ₈			
30 40 45 45 50 55 40 43	A-DO	0.28						
55	1.60	0.24						
WP .	1.10	0.93	•					
6 5	0.45		•					
40	0.40	0.01						•
	·D	0						
Flow: 55	·51cbs = 1.	57 ems						

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	8
	12	(8)	4	0	U
Maximum Thalweg Depth	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep;	Stream relatively shallow; < 0.6 m	
Average of the four deepest depths recorded	25	(16)	0.6 - 0.9 m	0	16
Riffle:Riffle or Bend:Bend Ratio Average distance	Diverse habitats; meandering stream with deep	Diverse habitats; bends and riffles present, but not	Habitat diversity low; occasional riffles or bends,	Habitat monotonous; riffles or bends	
between riffles or bends divided by average stream width	bends and riffles common; ratio < 10	abundant; ratio 10 to 14	ratio 15 to 25	rare; generally continuous run habitat; ratio > 25	1 "
	(12)	8 .	4	0	
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	25
-	25	16	8	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	25
:	(25)	16	. 8	0	
		-		Total Score	86



Form 3600-532B (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary Waterbody ID Code **SWIMS Station ID** FH Database ID Stream Name ص عبا أر 37740259 10031887 Shebbugar 50700 Date (MMDDYYYY Station Name 090 201 Latitude - Longitude Determination Method Used Datum Used W658 Terroun Start Longitude End Latitude End Longitude Start Latitude County 43-72409 87.77538 43.72088 Water Characteristics Time (24-hr clock) Air Temperature (C) Water Temperature (C) Conductivity (µs/cr Transparency (cm) 23.55 Dissolved Oxygen % Saturation Dissolved Oxygen (mg/l) 30.5 Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): Water Clarity: Clear X Jurbid X Below: Above: (m) __ Stained Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 35.0 Channel Condition: > 20-year-old 10- to 20-year-old X Natural < 10-year-old Concrete Channel Channelization (check one) Channelization Channelization Percent Channelization Sinuosity Gradient (m/km) Stream Order Basin Area (km²) 0 Comments / Notes 13 10 10 30 40 50 60 20 80 90 100 0.63 120 0.30 130 0.03 140 RB Flow: 61.04 cBs = 1.73 cms

Form 3600-532B (R 6/07)

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Rating Item	Excellent	Good	Fali	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	Coole
·	12	8.	4	O	8
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	**************************************
deepest depths recorded	25	16	8	0	8
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	
	(12)	8	4	0	12
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	Angeles and the second
	(25)	16	8	0	25
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	25
:	25)	16	8	0	
				Total Score	78

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Wadable Stream Qualitative Fish Habitat Rating for Streams > 10 m wide

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary FH Database ID Waterbody ID Code SWIMS Station ID Stream Name 50100 Date (MMDDYYYY) 335 09012011 Datum Used Latitude - Longitude Determination Method Used errain End Longitude End Latitude **Water Characteristics** Conductivity (µs/cm) Air Temperature (C) Water Temperature (C) Transparency (cm) Time (24-hr clock) 708.8 Dissolved Oxygen % Saturation Dissolved Oxygen (mg/l) 8.2 Water Clarity: Water Level (check one - measure distance if Above or Below Normal): Flow (m³/sec) None Below: Clear Turbid Stained Above: (m) (m) Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 4400 Channel Condition: Natural 10- to 20-year-old < 10-year-old > 20-year-old Concrete Channel Channelization Channelization Channelization Gradient (m/km) Stream Order Basin Area (km²) Percent Channelization Comments / Notes

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good S	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	. /
•	12	8	4	. 0	7
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
deepest depths recorded	(25)	16	8	0	25
Riffle:Riffle or Bend:Bend Ratio	Diverse habitats; meandering	Diverse habitats; bends and riffles	Habitat diversity low; occasional	Habitat monotonous;	
Average distance between riffles or bends divided by average stream width	stream with deep bends and riffles common; ratio < 10	present, but not abundant; ratio 10 to 14	riffles or bends, ratio 15 to 25	riffles or bends rare; generally continuous run habitat; ratio > 25	4
	12	8	<u>(4)</u>	0	′
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	8
	25	16	(8)	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	1/0
:	25	(16)	8	0	
		-		Total Score	57

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603466 Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary SWIMS Station ID Waterbody ID Code FH Database ID Stream Name 100335 50 100 Shoboy gan Date (MMDDYYYY) Station Name (63) 09012011 Latitude - Longitude Determination Method Used Datum Used Javigator 18crain End Longitude End Latitude Start Longitude Start Latitude 43.72 13.72893 Water Characteristics Water Temperature (C) Conductivity (µs/cm) Air Temperature (C) Transparency (cm) Time (24-hr clock) 729.8 13:55 24.0 Dissolved Oxygen % Saturation Dissolved Oxygen (mg/l) 8,29 D5:466.8 115, Water Clarity: Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): ☐Clear ☒Лurbid Below: Stained ___ Above: (m) (m) Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 00 Channel Condition: Natural 10- to 20-year-old < 10-year-old > 20-year-old Concrete Channel Channelization Channelization Channelization Basin Area (km²) Gradient (m/km) Stream Order Percent Channelization 82 0 Comments / Notes 88 1.56 0.60 42 0.90 1-03 0,83 0.90 0.90 0.60 0.50 0.03 Flow: 59.87 cbs = 1.69 cms

10 408400 ? - Entocol

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good	Fair	Poor	Score
8 Mank Stability We of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	
	12	8	4	0	4
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	8
deepest depths recorded	25		8	0	WAL
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	8
	12	8	4	0	
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	16
	25	(16)	* * 8	0	14
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	25
	(25)	16	8	. 0	_
				Total Score	SARA

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Instructions: Bold field	ds must be comple	eted. Record all i	neasurements in	metric units	•			
Station Summary			 .		OMBURGO C		CU Detel	00 ID
Stream Name	oygan	River	Waterbook	ly ID Code	SWIMS S		FH Databa	74
Date (MMDDYYYY)	Station Name	Onton	River	Conf	Twen o	ce (25 med	ers)
Latitude - Longitude D	Naviga	•				•	Dati V	um Used 165 89
Start Latitude 43-7-2358	Start Londitude		tude .75439	End Longitud	16 1802	County	20490	
Water Characteristics	decre income page of the product of the page of the pa	02-1-2-1						
Time (24-hr clock) .	Air Temperature (C みよう		nperature (C)	Conductivi 74	ity (µs/cm) FY, 6		Transparen	cy (cm)
Dissolved Oxygen (mg/l)	8.77	Dissolved Ox	ygen % Saturation		рН 8 . З	36	7DS!	4762
Flow (m³/sec)	Water Level (che	ck one - measure	distance if Above	or Below No	rmal):	Water Clar	rity:	
1.25	Normal 🗵	Below: O	(m)	ove:	(m)	Clear	Turbid	Stained
Channel and Basin Cl	The state of the s							
Mean Stream Width (r	10.0		Statio	n Length (m	4	00.00		•
Channel Condition: (check one)	Natural [> 20-year-old Channelization	10- to Chan	20-year-old nelization	□ćı	10-year-old nannelization	,	ncrete Channel
Percent Channelization	on Sinuosity	Q() Gra	ndient (m/km) 194	Strea	m Order	12	Basin Area (k	m²)
Comments / Notes	/, (f 1	j	<u> </u>	- %		
Comments/Notes 5+Can, 1	width	1520	8t	, ,				
Distance (6	it) Dep	th (6+)	Vel. (B+/5				
r_R	1.	0	<i>6</i>	77				
5	/ -	00	0.	93				,
10	-	5	0.	66				
10	· ·	70		10				
	0.	90		75	and the second s	Unidentific		
25	6	90	1.6	20				
30 35	1.1	15	1.2	.a.				
40	1.3	30	0.	76	المساورة ال	ggeneral and a general section of		
45	/ -:	50	ing Control and the substitution of the substi	s6				
50	0.0	40	0.					
RB)		0				п.
Flow; 4	U 1 - 1	e = /.	2 6 0 100	e				
tlow, T	1.00	and was	C. M. March	κ.,				
A AA	, , , , , , , , , , , , , , , , , , ,	•						
Down Mo	ain then	1						

Form 3600-532B (R 6/07)

Page 2 of 2

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	Score . /
	12	8	<u>(4)</u>	0	4
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
deepest depths recorded	25	(16)	8	0	16
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	12
<u> </u>	12)	8	4	0	10
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	25
	(25)	16	8	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	25
:	(25)	16	. 8	0	
				Total Score	82

16.0 80

State of Wisconsin Department of Natural Resources dnr.wi.gov

Wadable Stream Qualitative Fish Habitat Rating for Streams > 10 m wide

Form 3600-532B (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units.
Station Summary
Stream Name Owler River Waterbody ID Code SWIMS Station ID FH Database ID 51200 603480 11138
Date (MMDDYYYY) Station Name
Date (MMDDYYYY) Station Name 08042011 15m Upstream of Ourtown Road
Latitude - Longitude Determination Method Used Datum Used
Terrain Navigator W6584
Start Latitude Start Longitude End Latitude End Longitude County Shoboygan
Water Characteristics
Time (24-hr clock) Air Temperature (C) Water Temperature (C) Conductivity (µs/cm) 7 Transparency (cm)
Dissolved Oxygen (mg/l) /6.48 Dissolved Oxygen % Saturation pH 8.96 TD5:404.
Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): Water Clarity:
Normal Below:(m) Above:(m) Clear Turbid Stained
Channel and Basin Characteristics
Mean Stream Width (m) /2 -0 Station Length (m)
Channel Condition: Natural > 20-year-old 10- to 20-year-old < 10-year-old Channelization Concrete Channel
Percent Channelization Sinuosity / 8 3 Gradient (m/km) Stream Order 4 Basin Area (km²)
Comments / Notes
Flow: 18.18 cbs (0.51 cms)

Form 3600-532B (R 6/07)

Page 2 of 2

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability 6 of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	12
	12	8	4	0	
Maximum Thalweg Depth Average of the four	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
deepest depths ecorded	25	16	(8)		8
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	10
	(12)	8	4	0	10
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	
cobble, or gravel	25	16	8	0 -	25
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	25
	(25)	16	. 8	o	O J
				Total Score	39

12/120

Form 3600-532B (R 6/07)

Page 1 of 2

	as must be completed. Record	ran measurements in metric	ums.	
Station Summary			A CAMBRO CO	ID EU Database ID
Stream Name	Rive (Waterbody ID Co	ode SWIMS Station	
		31800	1/0-0100	01 37770101
Date (MMDDYYYY)	Station Name	R CtH	Ly A	
08042011	160	an 50 011		D-1 # 1#
	Determination Method Used			Datum Used
TRECOIN	Navigator	an altanda - Eudia	naitudo lo	MG2 8,
Start Latitude	Start Longitude Entra 4	3.6/975 End Lo	ngitude Cou	showy gan
43.62299		2.01140 84	- 070-11.	3
Water Characteristics		T (0)	hartistic (up/om)	T
Time (24-hr clock)	Air Temperature (C) Wate	and the same of th	Juctivity (µs/cm) 702.3	Transparency (cm)
14.43	Company of the second s	26.33		· · · · · · ·
Dissolved Oxygen (mg/l)	11.45	d Oxygen % Saturation	* PH 8.28	, , , , , , , , , , , , , , , , , , ,
Flow (m³/sec)	Water Level (check one - mea	sure distance if Above or Belo	w Normal): Water	Clarity:
0.38	Normal Below:	(m)	(m) 🔲 C	Clear Turbid Stained
Channel and Basin C	 Control of the Control of the Control			
Mean Stream Width (m)	Station Leng	fh (m)	
Heart Stream Width	"" 13.0	otation Eong	"''''''''''''''''''''''''''''''	
Channel Condition: A		id10- to 20-year-	old	roid H
(check one)	Natural			
Percent Channelizati	on Sinuosity / /	Gradient (m/km) 🧳 /	Stream Order //	Basin Area (km²)
O	1.68	0 4 17	Eufer .	
Comments / Notes		1166661		
clown V	w10th (Bt);	401004		
		1/01/	. (
Solance (St) Deyth (ot) yel. (181/5	·)	•
LB	D.	Karanya .		
ų,	1:2	0,0		
8	1.45	0.10	*** **	
12	2.15	0.26		
The state of the s	and the same of th	and the second s	an famous against an a fam NN Samoly Mark Samolog and Samolog and	
16	2.00	0.24		
26	1.90	0-17		
24	1.95	0.90		
28	1.90	0-19		
	2.30	0.25		
	يده بعدود والماسية والمستقد وا	• See the second materials of the second	and the College of the State of	programme referred the
3,6	2.20	0.16		
40	1.40	0.09		
45 44	0.95	0.00		
1 (4) D	0	. ~		
RB		Ø		
		· · · · · · · · · · · · · · · · · · ·		
flow: 1	3.26 CB5 (0.38 cms)		

Form 3600-532B (R 6/07)

Rating Item	Excellent	Good	Fair	Poor	Score
Bank Stability % of bank protected by rock or vegetation	No significant bank erosion; ≥ 90% of bank protected; < 10% bare soil	Limited erosion; 70 to 90% of bank protected; 10 - 30% bare soil	Moderate erosion; 50 to 69% of bank protected; 31 - 50% bare soil	Extensive erosion; < 50% of bank protected; > 50% bare soil	4
	12	8	(<u>4</u>)	0	/
Maximum Thalweg Depth	Stream very deep; ≥ 1.5 m	Stream relatively deep; 1 - 1.5 m	Stream moderately deep; 0.6 - 0.9 m	Stream relatively shallow; < 0.6 m	
Average of the four deepest depths recorded	25	16	(8)	0	8
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	0
·	12	8	4	<u></u>	
Rocky Substrate % of substrate, by area, that is bedrock, boulder, rubble/ cobble, or gravel	Extensive rocky substrate; ≥ 65% of the stream bed	Moderate rocky substrate; 45 - 65% of stream bed	Limited rocky substrate; 15 - 44% of stream bed	Rocky substrate uncommon; < 15% of stream bed	8
	25	16	(8)	0 .	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; ≥ 12% of stream	Cover common, but not extensive; 7 - 12% of stream	Occasional cover, limited to one or two areas; 2 - 6% of stream	Cover rare or absent; limited to < 2% of stream	8
<i>:</i>	25	16	8	0	
				Total Score	28

Form 3600-532A (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units.

Station Summary								
Stream Name	0.		Waterbody ID	Code	SWIMS Stat	ion ID	FH Datab	ase ID
Dribn	River		5/200	>	10031	890	1377	42178
Date (MMDDYYYY) Station Name		^ -3				1-2 , ,	, , , , , , , , , , , , , , , , , , ,
08042011	15m UPSTF	ram of	S Riss	2000	Rosa	<i>d</i>		1
	de Determination Method U		· /		•		Dat	um Used
Terrain	Navigador	u	•				- 1	165 84
Start Latitude	Start Longitude	End Latitude	End	Longitude		County		003 07
43-60146	87.87311	43.60		7.8:			06490	6
Water Characteris	CONTRACTOR OF THE PARTY OF THE		9/4 0			.)/		
Time (24-hr clock)	internation of the control of the co	Water Temperat	ure (C) Co	onductivity	r (us/cm)		Transparen	ov (om)
13:5D	(a) (b)	25,2	ethological		0.0	į	24	- a
Dissolved Oxygen (n	ng/l) _ Die	solved Oxygen %		<u> </u>	ρH			
Dissolved Oxygen (II	8.55		56.5		8.0	7 -	725	422 5
Flow (m³/sec)	Water Level (check one -	measure distan	ce if Above or Be	low Norn	nal): Wa	ter Clarit	y:	
0.36	Normal Below:		n) Above:		(m) [Clear	Turhid	Stained
Channel and Basi			,, /1.0010.	:	(11)		- A SUNG	Otaliled
Mean Stream Wid	The state of the s	A COMPANY	Station Ler	ath (m)	And the state of t) (1)		
1.5	3	2.5	Canon Let		40	<u> </u>		
Channel Conditio (check one)	n: Natural > 20-yı Chann	ear-old elization	10- to 20-year Channelizati			year-old nelization	Co	ncrete Channel
Percent Channeli	zation Sinuosity / (/9	Gradient (7	Stream	Order 🤭	В	asin Area (l	(m²)
D	1.4	/ • /	16		Order 3			
Comments / Notes	011 1 011	5 DL		•				
Stream	wildthe: 24	70 0		/ ¢				
Distance (Bt	S) Depth (B	P) (rel. 64/3	5				
UND	Dar son	menone care the cost (the site of the cost of the cos	in a string of the string of t	mace has a secretary and the second of				
~'`ā	0.75		0.01					
V V	0.85		0.48	{				
lo	0.80	•	0.70)				
8	1.00		0.70					
	_{restructure} a naviation nation est as per en en el (time se residente est as la consideration al properties de La Colombia	જ્યાંથી, સ્ટિપિટિસ્ટ કર ઉપલબ્ધિક કરાય કરો ત્યારે એક સામ હાર્ય, તમાર હામ હોય વિસ્તારો પ્રેપ્ટ નોલી અને	0.83	dan 4 aring menang pengg	The second second	-*.*		
10	1.10		0-89				•	
14	1.10							
	1.05		0.79					
18	•		0.71					
18	0.95	the the content the content of the c	0.47					
	ano manalane ana ana ani sa mai s	- manufacturing discharge (p)	0.38	a Tarinda Balanda and a said and	والمتعارض والمتع	e a New Paris		•
20	0.95		0.44					
24	0.50		0-14					
RB	0			5				
•	: 12.62 ebs	10.3	66 cms)				
y (/= -	1 7 -			1				

Form 3600-532A (R 6/07)

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Rating Item	Excellent	Good	Fair	Poor	C
Riparian Buffer Vidth (m) Vidth of contiguous	Riparian zone well protected; buffer wide (> 10.0 m)	Riparian zone protected, but buffer width	Riparian zone moderately disturbed, buffer	Most of the riparian zone disturbed, buffer	Score
ndisturbed land ses; meadow, hrubs, woodland,		moderate (5.0 - 10.0 m)	narrow (1.0 - 4.9 m)	very narrow or absent (< 1.0 m)	
vetland, exposed ock	15	(10)	5	0	10
Bank Erosion Vidth of bare soil on ank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	
	15	10	(5)	0	-30%
Pool Area % of stream length in pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	3
	10	.7	3	0	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream relatively wide and shallow; width/depth > 25	5
and pools	15	. 10	(5)	0	
Riffle:Riffle(or) Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	5
	15	10		0	
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	0
	15	10	5		
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	14
	15	(10)	5	0	10
Charles Co				Total Score	38

135 8 100 1 35 g

Form 3600-532A (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary Stream Name Waterbody ID Code SWIMS Station ID FH Database ID Weeders CK. 37320 50800 10015600 Date (MMDDYYYY) Station Name State Wighway 09272011 18stream Latitude - Longitude Determination Method Used Datum Used Wort barnin 165 84 County Start Longitude End Latitude Start Latitude End Longitude 43.7167 87,77284 11708 Water Characteristics Time (24-hr clock) Air,Temperature (C) Water Temperature (C) Conductivity (µs/cm) Transparency (cm) 4.65 14.46 L Dissolved Oxygen (mg/l) Dissolved Oxygen % Saturation ρН TDS: 436,7 89.1 Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): Water Clarity: XAbove: 0 Turbid Normal Below: (m) L Clear Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 79.0 Channel Condition: Natural > 20-year-old 10- to 20-year-old < 10-year-old Channelization Channelization Channelization Concrete Channel Percent Channelization Gradient (m/km) Sinuosity Stream Order Basin Area (km²) .86 Comments / Notes Significant Rain in Last 48 HRS; Salmay Steel head? present in Stream WX: 100% CC, cool FLOW = 1,76 CFS; 0,050 CMS stream width: 10.0Ft Depth 16+) re! (+15) LB 0.2 0, 10 0.3 0,38 0,35. 0,53 0.45 0,65 0.45 0.67 0,54 0,60 0,70 0,45 0,28 0,70 0,21 0,50 0,40 0.05

Form 3600-532A (R 6/07)

Rating Item	Excellent	• Good	Fair	Poor	Score
Riparian Buffer Width (m) Width of contiguous undisturbed land uses; meadow,	Riparian zone well protected; buffer wide (> 10.0 m)	Riparian zone protected, but buffer width moderate (5.0 - 10.0 m)	Riparian zone moderately disturbed, buffer narrow (1.0 - 4.9 m)	Most of the riparian zone disturbed, buffer very narrow or absent (< 1.0 m)	
shrubs, woodland, wetland, exposed rock	(15)	10	5	0	· ~
Bank Erosion Width of bare soil on bank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	0
	15	10		(0)	
Pool Area % of stream length in pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	James
	10	(7)	3	0	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream relatively wide and shallow; width/depth > 25	10:
and pools	15	(10)	5	0	
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	15
a volago otroain matri	(15)	10	5	0	
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	10
	15	(10)	5	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	10
t.	15	(10)	5	0	,,,
•				Total Score	67



Form 3600-532A (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary Waterbody ID Code SWIMS Station ID FH Database ID Stream Name 3693044-3 50800 10031564 nloodons Date (MMDDYYYY) Upstream Latitude - Longitude Determination Method Used Datum Used Garmin WGS 84 County Sheboygan End Longitude End Latitude Start Latitude 87,7773 Water Characteristics Time (24-hr_clock) Air Temperature (C) Water Temperature (C) Conductivity (µs/cm) \$ 75 825.0 Dissolved Oxygen (mg/l) Dissolved Oxygen % Saturation Water Level (check one - measure distance if Above or Below Normal): Water Clarity: Flow (m³/sec) 0.036 Normal. Clear Turbid Stained Below: Above: Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 2.0 00 Channel Conditions 10- to 20-year-old > 20-year-old < 10-year-old **∠**îNatural Concrete Channel Channelization Channelization Channelization (check one) Percent Channelization Gradient (m/km) Stream Order Basin Area (km²) Sinuosity Comments / Notes 100 %CC, NO PRECIP, COO) & 60% Significant Precip in Last 48 hrs Stream width: 6,5 ft Flow = 1,28 CFS , 0.036 CMS Vel (Pt/S) 020 50.) 1.00 0,40

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		•			6
Rating Item iparian Buffer lidth (m) lidth of contiguous ndisturbed land ses; meadow,	Excellent Riparian zone well protected; buffer wide (> 10.0 m)	Good Riparian zone protected, but buffer width moderate (5.0 - 10.0 m)	Fair Riparian zone moderately disturbed, buffer narrow (1.0 - 4.9 m)	Most of the riparian zone disturbed, buffer very narrow or absent (< 1.0 m)	Score
hrubs, woodland, vetland, exposed ock	15	10	(5)	0	
tank Erosion Vidth of bare soil on ank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	5
,	15	10	(5)	0	
Pool Area % of stream length n pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	0
	10	7	3	(' o ')	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream-relatively wide and shallow; width/depth > 25	10
and pools	15	(10)	5	0	
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	5
	15	10	(5)	0	<u> </u>
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	//
	15	10	5	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	10
	15	(10)	5	. 0	
5			· · · · · · · · · · · · · · · · · · ·	Total Score	4

02/2.5

Form 3600-532A (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units. Station Summary Stream Name Waterbody ID Code SWIMS Station ID FH Database ID 42220 377 Willow Creek Date (MMDDYYYY) Station Name Willow Creek 115 08 05 2011 Latitude - Longitude Determination Method Used Datum Used Occall End Latitude End Longitude Start Latitude County Water Characteristics Aîr Temperature (C) Time (24-hr clock) Water Temperature (C) Conductivity (µs/cm) Transparency (cm) 0955 9,07 CM Dissolved Oxygen (mg/l) Dissolved Oxygen % Saturation рΗ 7,89 8,73 Water Level (check one - measure distance if Above or Below Normal): Water Clarity: Flow (m³/sec) Normal Clear L Turbid __Above: Stained Below: (m) Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 210 6.0 Channel Condition: Natural > 20-year-old 10- to 20-year-old < 10-year-old Concrete Channel Channelization Channelization Channelization Gradient (m/km) Sinuosity Stream Order Basin Area (km²) Percent Channelization 2 Comments / Notes WX: 20% CC Breeze ≈ 75°F Strem Width LB 0,18 OA 0,15 0.22 0.05 0.27 0.75 0.75 0.31 0.65 0.14 0,45 8 0.2 0 0 CR = 0.023 CMS

Form 3600-532A (R 6/07)

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	<u> </u>				2
Rating Item Riparian Buffer Width (m) Width of contiguous undisturbed land uses; meadow,	Excellent Riparian zone well protected; buffer wide (> 10.0 m)	Riparian zone protected, but buffer width moderate (5.0 - 10.0 m)	Fair Riparian zone moderately disturbed, buffer narrow (1.0 - 4.9 m)	Most of the riparian zone disturbed, buffer very narrow or absent (< 1.0 m)	Score 15
shrubs, woodland, wetland, exposed rock	(15)	. 10	5	0	
Bank Erosion Width of bare soil on bank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	
	15	10	(5)	o	
Pool Area % of stream length in pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	3.
	10	7	(3)	0	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream relatively wide and shallow; width/depth > 25	Approximate and the second
and pools	15	10	(5)	0	
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	10
	15	(10)	5	0	
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	10
	15	(10)	5	0	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	5
	15	10	(5)	0	
13/		•		Total Score	CZ

3.5

Total Score



Instructions: Bold fields must be completed. Record all measurements in metric units.

Wadable Stream Qualitative Fish Habitat Rating for Streams < 10 m wide

Form 3600-532A (R 6/07)

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Station Summary Stream Name Waterbody ID Code SWIMS Station ID FH Database ID 50740 Willow Creek 10009340 Date (MMDDYYYY) Station Name US Greendale Road Willow Creek 08 05 2011 Latitude - Longitude Determination Method Used Datum Used avigator recrain W6589 Start Longitude End Latitude Start Latitude End Longitude County 43.74572 Sheboy gan Water Characteristics Air Temperature (C) Water Temperature (C) Conductivity (µs/cm) Time (24-hr clock) Transparency (cm) 24.0 1148 105 122 cm Dissolved Oxygen % Saturation Dissolved Oxygen (mg/l) ρН 7,03 9,28 9.4 Water Clarity: Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): Normal Clear L Turbid (). OQ Below: _l Above: Stained Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) Channel Condition: Natural > 20-year-old 10- to 20-year-old < 10-year-old Channelization Concrete Channel Channelization Channelization Percent Channelization Gradient (m/km) Sinuosity Stream Order Basin Area (km²) 30 9.08 Comments / Notes WX: 10% CC 275°F Slight Breeze STREAM WIDTH LOFT La 0,04 0,13 0,12 0:15 D. 6 0,31 0.6 0.14 0.6 0.10 0,4 \bigcirc 0.72 cfs = 0.021 m3/s \bigcirc

Form 3600-532A (R 6/07)

Rating Item	Excellent	Good 9	Fair	Poor	Score
Riparian Buffer Width (m) Width of contiguous undisturbed land uses; meadow, shrubs, woodland, wetland, exposed	Riparian zone well protected; buffer wide (> 10.0 m)	Riparian zone protected, but buffer width moderate (5.0 - 10.0 m)	Riparian zone moderately disturbed, buffer narrow (1.0 - 4.9 m)	Most of the riparian zone disturbed, buffer very narrow or absent (< 1.0 m)	1500
rock	/ 15)`	10	5	0	
Bank Erosion Width of bare soil on bank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	5
	15	10	(5)	0	
Pool Area % of stream length in pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	3.
	10	7	(3)	0	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream relatively wide and shallow; width/depth > 25	
and pools	15	10	(5)	0	
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	10
	15	(10)	5	0	
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	10
	15	(10)	5	0	,
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	lp
•	15	(10)	5	0	
				Total Score	58

Form 3600-532A (R 6/07)

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Instructions: Bold fields must be completed. Record all measurements in metric units, Station Summary SWIMS Station ID Stream Name Waterbody ID Code FH Database ID 10021113 18912640 Willow Creek Date (MMDDYYYY) Station Name Woodlake 08 OS 3011 Willow Latitude - Longitude Determination Method Used Datum Used W658 Jerrain Start Latitude Start Longitude End Latitude End Longitude County 43,7502 2826 Water Characteristics Water Temperature (C) Conductivity (µs/cm) Time (24-hr clock) Air Temperature (C) Transparency (cm) 655 3 26.7 26.41 CN Dissolved Oxygen % Saturation οН Dissolved Oxygen (mg/l) 8,05 86,8 6.76 Flow (m³/sec) Water Level (check one - measure distance if Above or Below Normal): Water Clarity: Normal Clear | Turbid Below: __ Stained (m) ___ Above: . (m) Channel and Basin Characteristics Mean Stream Width (m) Station Length (m) 100 2.5 **Channel Condition:** > 20-year-old Channelization 10- to 20-year-old < 10-year-old Natural Concrete Channel (check one) Channelization Channelization Percent Channelization Sinuosity Gradient (m/km) Stream Order Basin Area (km²) 364 Comments / Notes WX: 30% CC 880°F STREAM width -794 0,18 0,16 0,15 0,03 ,23 CFS = 0.0,06 CMS Purple 100 sestrible et 5/1

Form 3600-532A (R 6/07)

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Rating Item	Excellent	. * Good	Fallres Co	Poor	Score
Riparian Buffer Width (m) Width of contiguous undisturbed land uses; meadow, shrubs, woodland,	Riparian zone well protected; buffer wide (> 10.0 m)	Riparian zone protected, but buffer width moderate (5.0 - 10.0 m)	Riparian zone moderately disturbed, buffer narrow (1.0 - 4.9 m)	Most of the riparian zone disturbed, buffer very narrow or absent (< 1.0 m)	15
wetland, exposed rock	(15)	10	5	0	
Bank Erosion Width of bare soil on bank, along transects	No significant bank erosion; < 0.20 m of bank is bare soil	Limited erosion; 0.20 - 0.50 m of bank is bare soil	Moderate erosion; 0.51 - 1.0 m of bank is bare soil	Extensive erosion; > 1.0 m of bank is bare soil	-10
,	15	(′ 10 <i>)</i>	5	0	•
Pool Area % of stream length in pools	Pools common; wide, deep, slow velocity habitat, balanced by other habitats; 40 to 60% of station	Pools present; not frequent or over- abundant; 30 to 39% or 61 to 70% of station	Pools present, but either rare or overly dominant, few other habitats present; 10 to 29% or 71 to 90% of station	Pools either absent or dominant, not balanced by other habitats; < 10% or > 90% of station	3.
	10	7	(3)	0	
Width:Depth Ratio Average stream width divided by average thalweg depth in runs	Streams very deep and narrow; width/depth ≤ 7	Stream relatively deep and narrow; width/depth 8-15	Stream moderately deep and narrow; width/depth 16-25	Stream relatively wide and shallow; width/depth > 25	10
and pools	15	(10)	_. 5	0	
Riffle:Riffle or Bend:Bend Ratio Average distance between riffles or bends divided by average stream width	Diverse habitats; meandering stream with deep bends and riffles common; ratio < 10	Diverse habitats; bends and riffles present, but not abundant; ratio 10 to 14	Habitat diversity low; occasional riffles or bends, ratio 15 to 25	Habitat monotonous; riffles or bends rare; generally continuous run habitat; ratio > 25	5
	15	10	(5)	0	
Fine Sediments % of the substrate that is < 2 mm (sand, silt, or clay)	Fines rare or absent, < 10% of the stream bed	Fines present but limited, generally in stream margins or pools; 10 to 20% of stream bed	Fines common in mid-channel areas, present in riffles and extensive in pools; 21 to 60%	Fines extensive in all habitats; > 60% of stream bed covered	
	15	10	5	$\begin{pmatrix} 0 \end{pmatrix}$	
Cover for Fish % of the stream area with cover	Cover/shelter for fish abundant; > 15% of stream	Cover common, but not extensive; 10 - 15% of stream	Occasional cover, limited to one or two areas; 5 - 9% of stream	Cover rare or absent; limited to < 5% of stream	5
	15	10	(5)	0	Selvenserversken er elferer er
75				Total Score	48

0.2 10.5